HG

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THE PEOPLE'S REPUBLIC OF CHINA

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Latex foam - Determination of apparent density

乳胶海绵表观密度测定

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Latex foam - Determination of apparent density

1 Scope

This Standard specifies the methods for the determination of apparent density of latex foam.

This Standard applies to the determination of apparent density of foam products made with natural rubber latex and synthetic rubber latex as the main raw material.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

HG/T 3054 Latex foam - Determination of linear dimensions

3 Term and definition

For the purpose of this document, the following term and definition apply.

apparent density

The mass of latex foam per unit volume under specified temperature and humidity.

4 Test instruments and materials

4.1 Balance

The accuracy of the balance is less than 0.1 % of the mass of the test piece.

4.2 Measuring tool

It shall meet the requirements of HG/T 3054.

4.3 Linseeds

7 Test methods

7.1 Measurement of the mass of test pieces

Under the conditions of 6.3, use a balance (4.1) to weigh test pieces, in grams (g).

7.2 Measurement of the volume of test pieces

Under the conditions of 6.3, use one of the following methods to measure the volume of test pieces.

7.2.1 Method A

It is applicable to Category I test pieces. According to HG/T 3054, measure the dimensions of the test piece and calculate the volume of the test piece, in cubic millimeters (mm^3).

7.2.2 Method B

It is applicable to Category II test pieces. PLACE a glass jar on the level platform; PUT the test piece in the glass jar naturally; FILL the gap of the test piece with linseeds until it covers about 2 cm of the test piece; MAKE the surface of the linseeds flat; MEASURE the height of the surface of the linseeds at six points (or more than six points) that are evenly distributed along the circumference of the jar and TAKE the arithmetic average. After taking out the test piece, USE the same method to measure the height of the surface of the linseeds; CALCULATE the difference between the two measured volumes before and after, that is, the volume of the test piece, in cubic millimeters (mm^3).

8 Results presentation

The apparent density of test pieces is calculated by formula (1):

$$\rho_a = \frac{m}{V} \times 10^6 \quad \cdots\cdots (1)$$

where:

ρ_a - the apparent density of the test piece, in kilograms per cubic meter (kg/m^3);

m - the mass of the test piece, in grams (g);

V - the volume of the test piece, in cubic millimeters (mm^3).

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